```
semaphore mutex, empty, full;
int count, in;
char[80] buffer;
mutex = 1; empty = 80; full = 0;
count = 0; in = 0;
```

```
process Pi(){
    L: 读入一个字符到x;
    P(empty);
    P(mutex);
    buffer[in] = x;
    in = (in + 1) % 80;
    count++;
    if(count == 80){
        count = 0;
        V(mutex);
        V(full);
    }else{
        V(mutex);
    }
}
```

```
process Q(){
    while(true){
    P(full);
    P(mutex);
    for(int i = 0; i < 80; i++)
        read buffer[i];
    in = 0;
    V(mutex);
    for(int i = 0; i < 80; i++){
        V(empty);
    }
}
```